

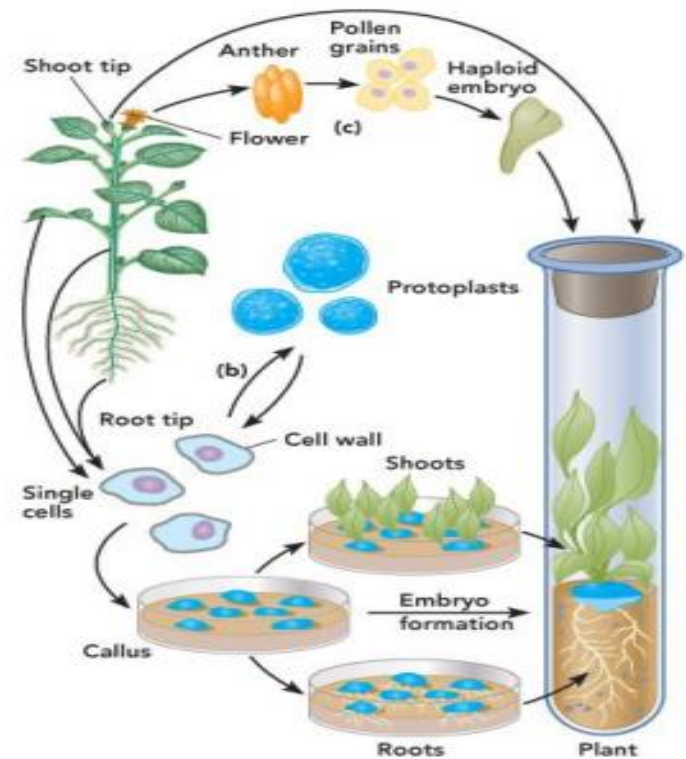
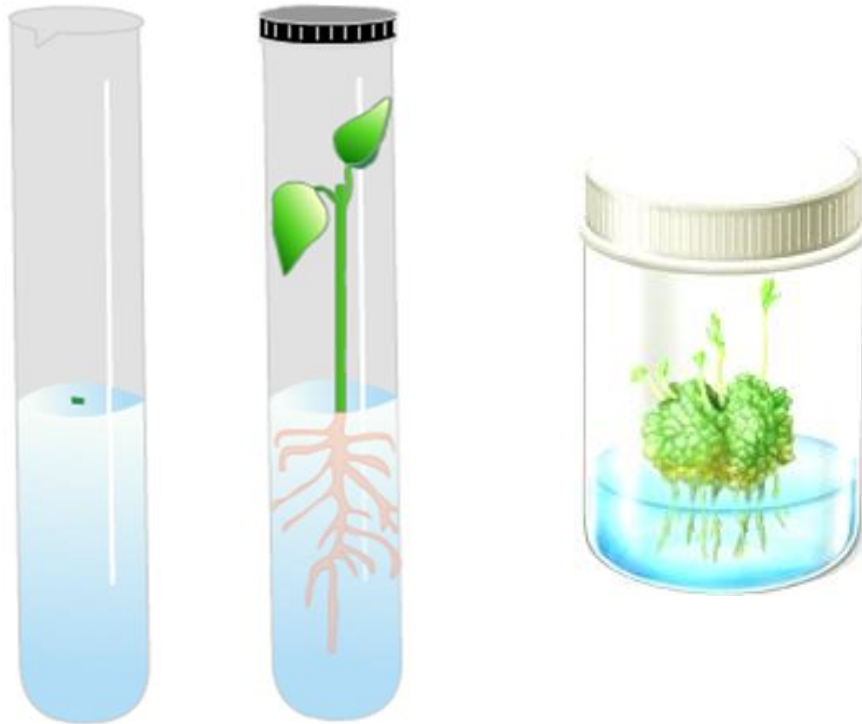
# Plant Cell & Tissue Culture



**Prof. Dr. Omar Sabry**

# Plant Cell & Tissue Culture

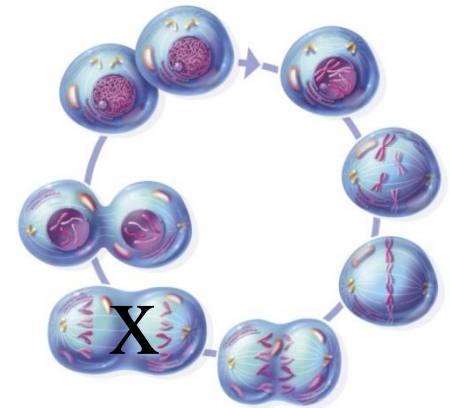
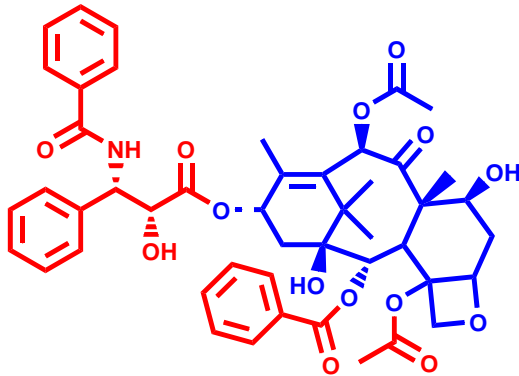
- **In vitro aseptic cultivation of Isolated plant organs or cells (root tips, shoot tips, leaves, embryos, cells on a nutrient medium).**



# Plant Cell & Tissue Culture

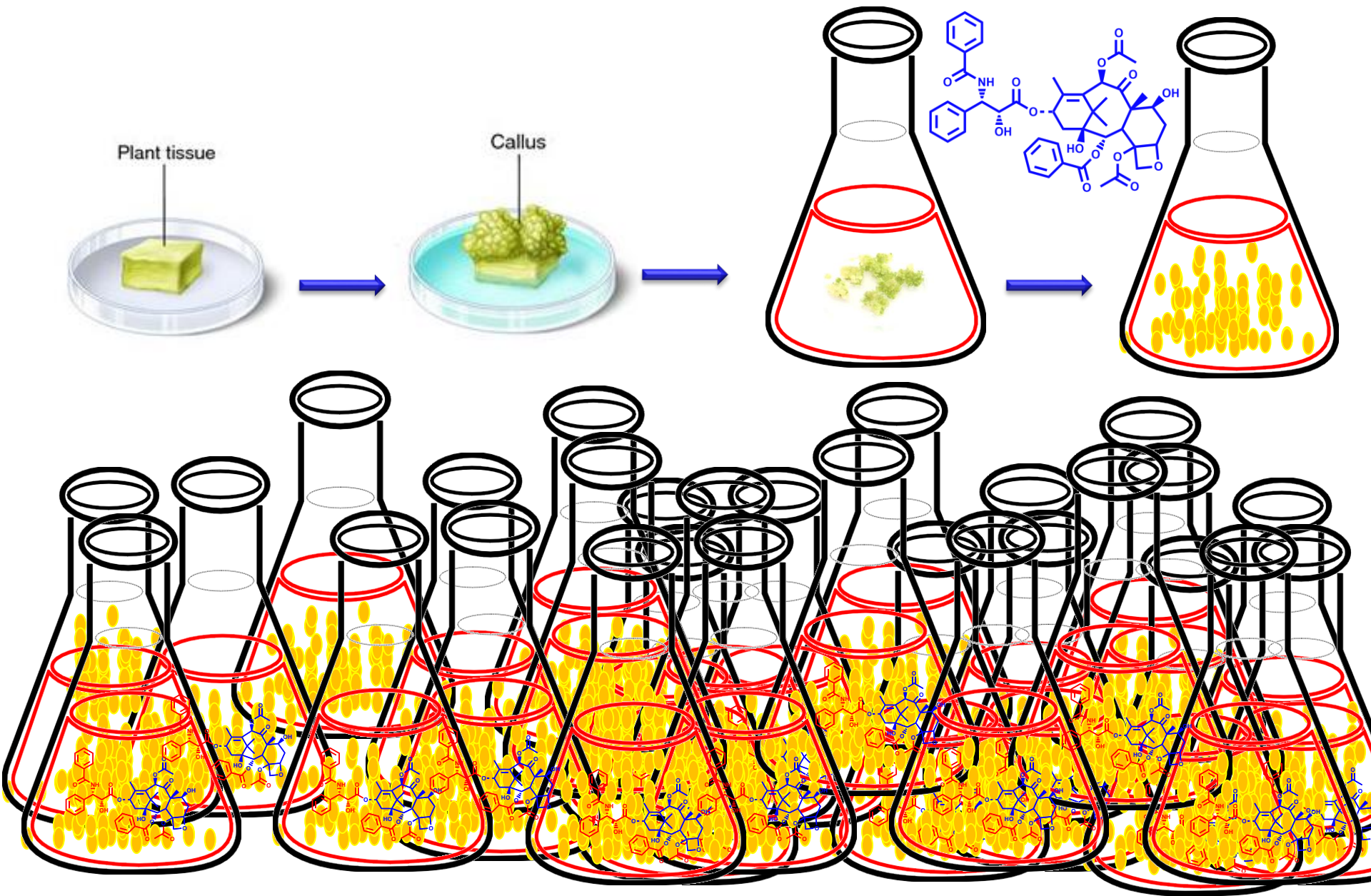
- ❑ Development of commercial production of expensive bio-medicaments (**Taxol**).

- ❑ Anti-cancer from *Taxus brevifolia*.



- ❑ 100 years old tree suitable for stem bark
- ❑ 3 mature trees = 1 gm of Taxol.
- ❑ 2 gm Taxol for Cancer treatment.

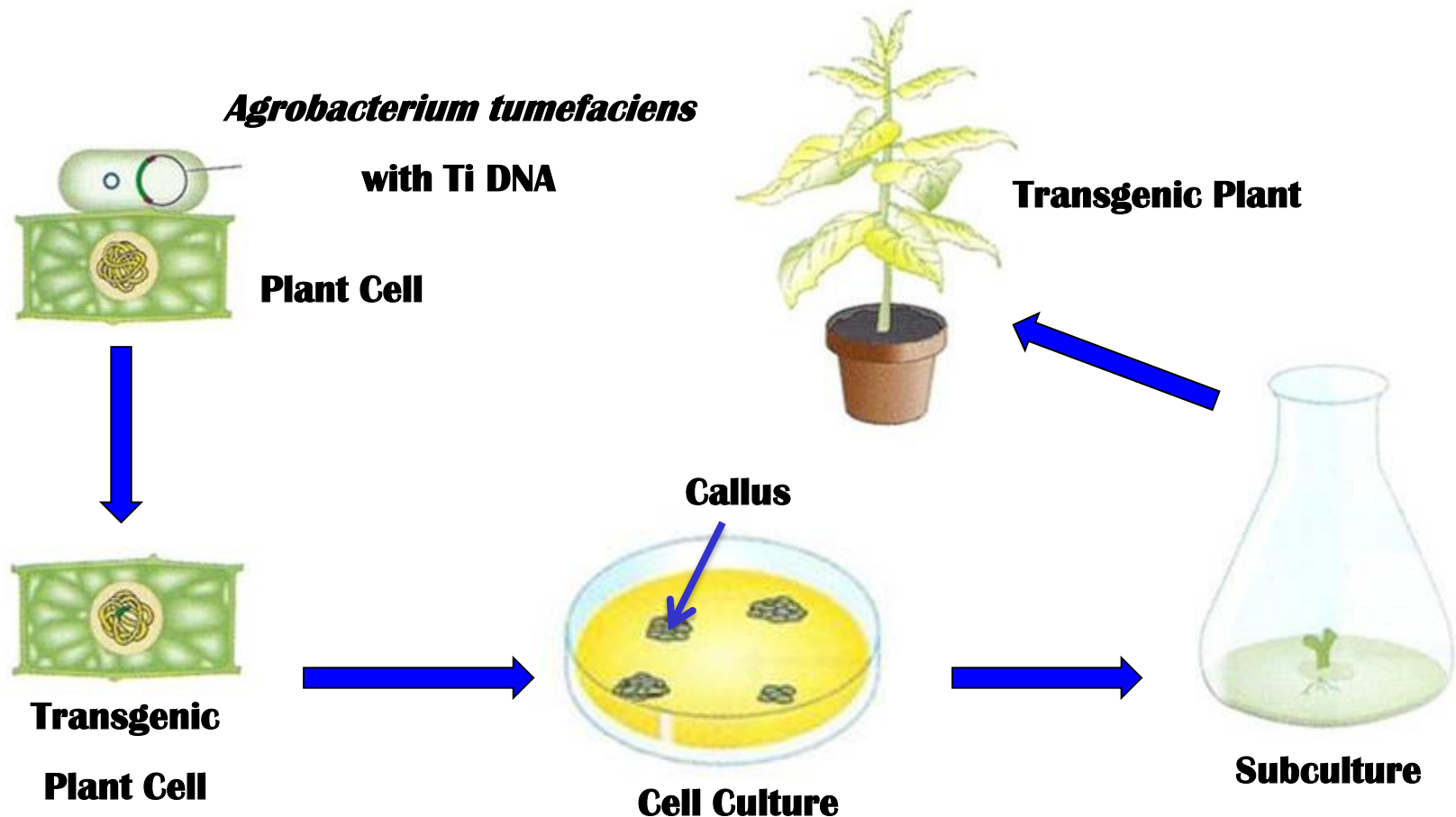
# Plant Cell & Tissue Culture





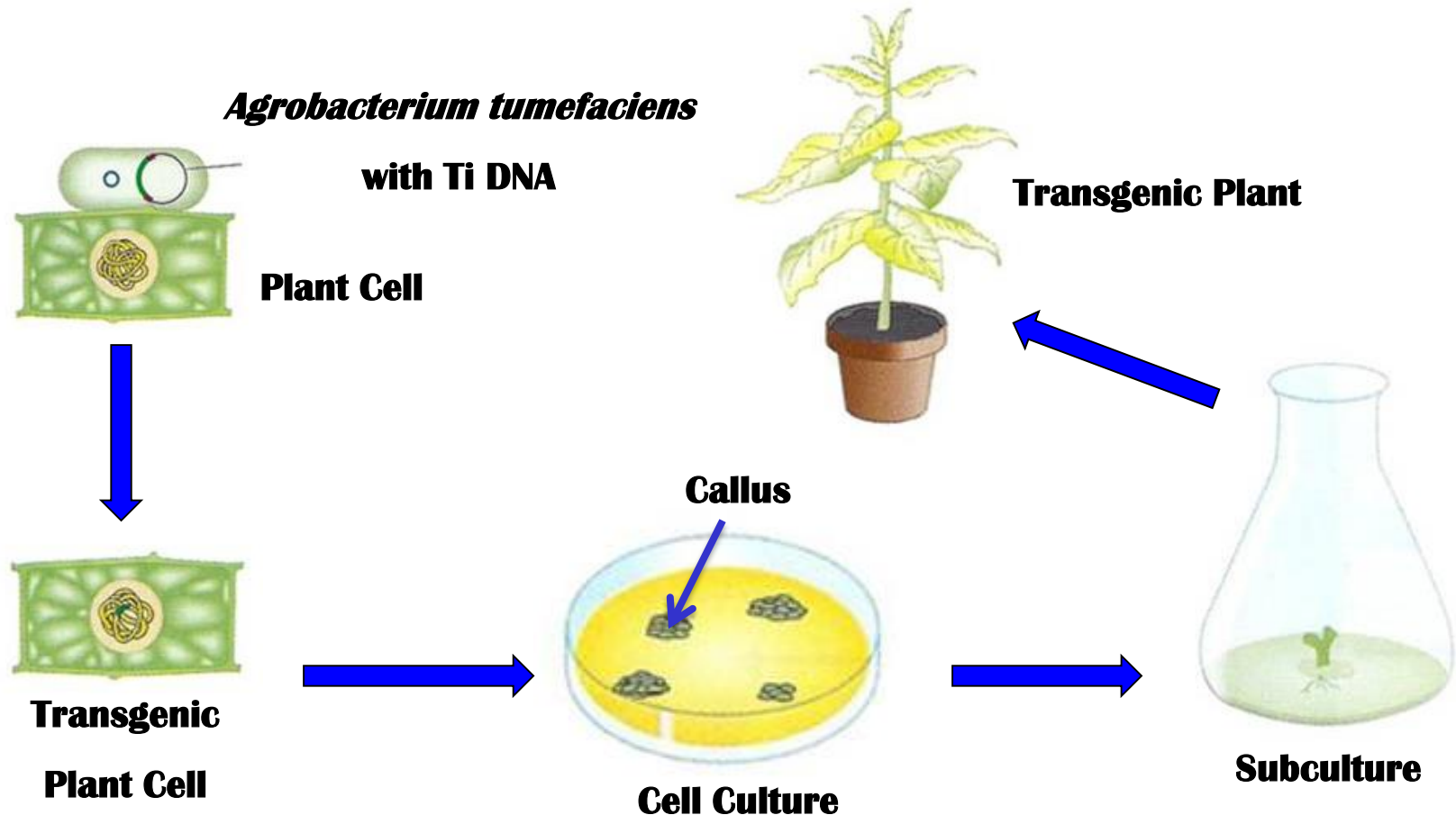
# Plant Cell & Tissue Culture

- ❑ **Improvement of medicinal plants by genetic engineering e.g. *Atropa belladonna* gives atropine and morphine.**



# Plant Cell & Tissue Culture

- ❑ **Improvement of medicinal plants by genetic engineering e.g. Insects resistant and microbes resistant plants.**



# Plant cell and tissue culture laboratory

## (A) Washing area



# Plant cell and tissue culture laboratory

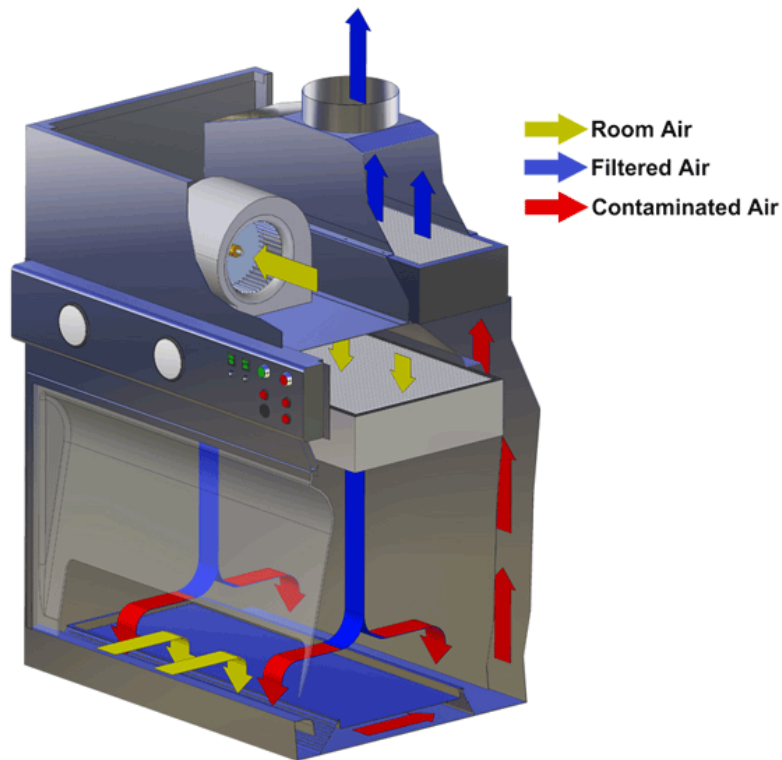
## (B) Media preparation room





# Plant cell and tissue culture laboratory

## (C) Transfer Area Laminar air - flow cabinets



# Plant cell and tissue culture laboratory

## (D) Culture room

